



(19) **United States**  
(12) **Patent Application Publication** (10) **Pub. No.: US 2003/0160478 A1**  
**Cheng** (43) **Pub. Date: Aug. 28, 2003**

(54) **INFANT SWINGING CHAIR**

**Publication Classification**

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(51) **Int. Cl.<sup>7</sup>** ..... **A47D 1/02**

(52) **U.S. Cl.** ..... **297/16.1**

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(57) **ABSTRACT**

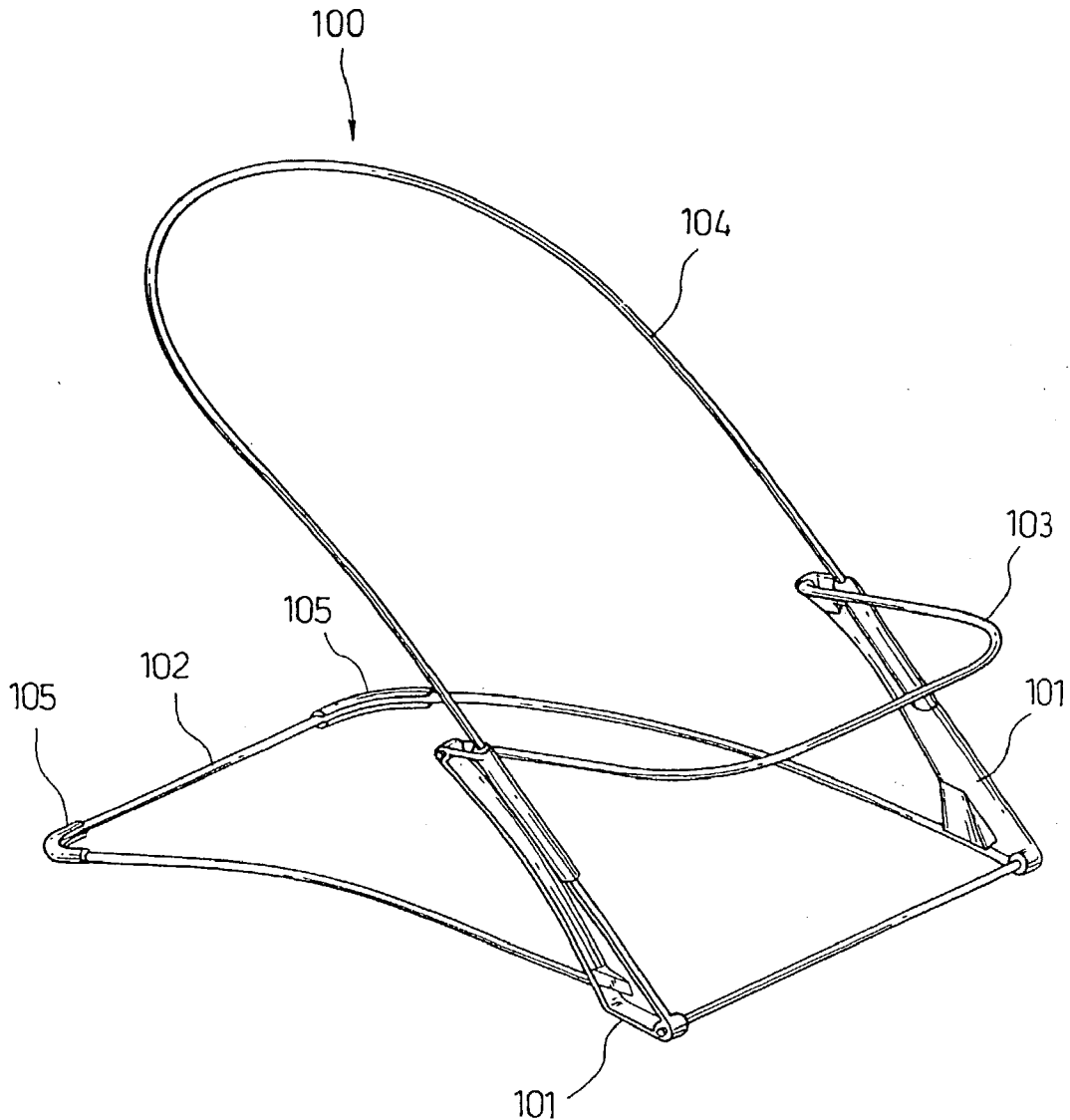
An infant swinging chair comprises a pair of fixture blocks, a base supporting structure, a seat supporting structure, a seatback supporting structure. The fixture block comprises a first end and a second end. The first end is provided with a horizontal protrusion for fixing the seat supporting structure, and a longitudinal groove for holding the seatback supporting structure. The second end is provided with pivotal hole for pivotally connecting the base supporting structure such that the base supporting block structure is able to pivot with respect to the fixture block.

(21) Appl. No.: **10/374,430**

(22) Filed: **Feb. 25, 2003**

(30) **Foreign Application Priority Data**

Feb. 28, 2002 (CN) ..... 02 2 06356.0



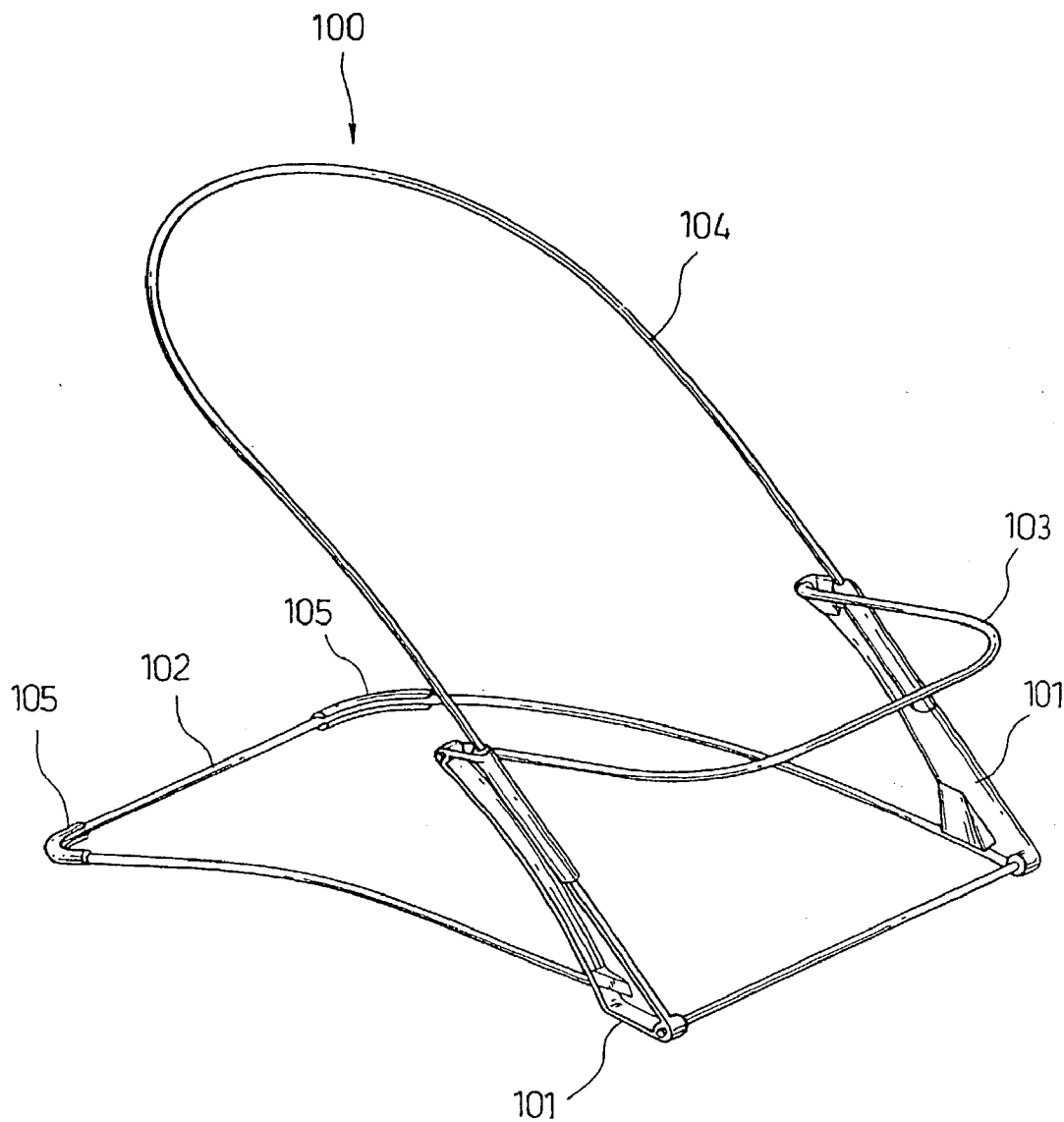


Figure 1

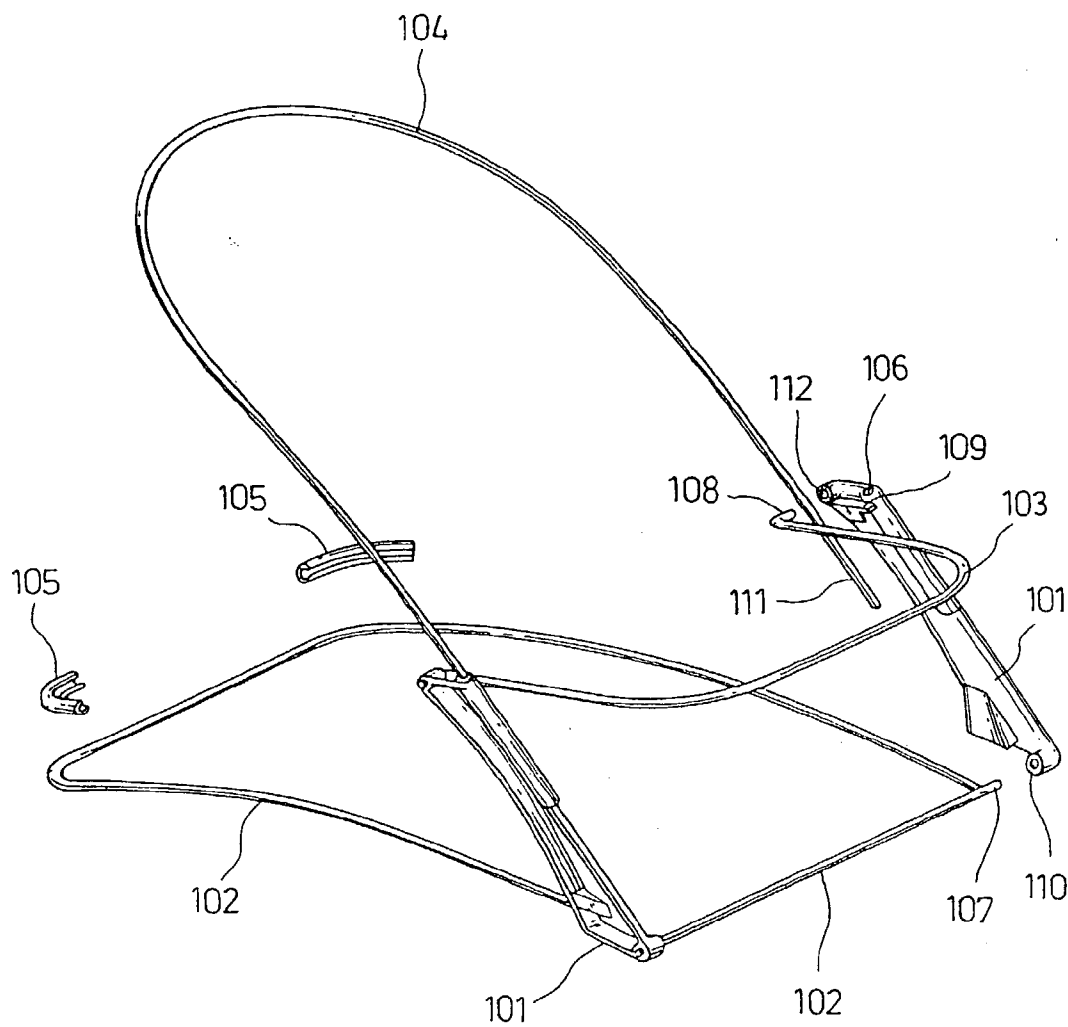


Figure 2

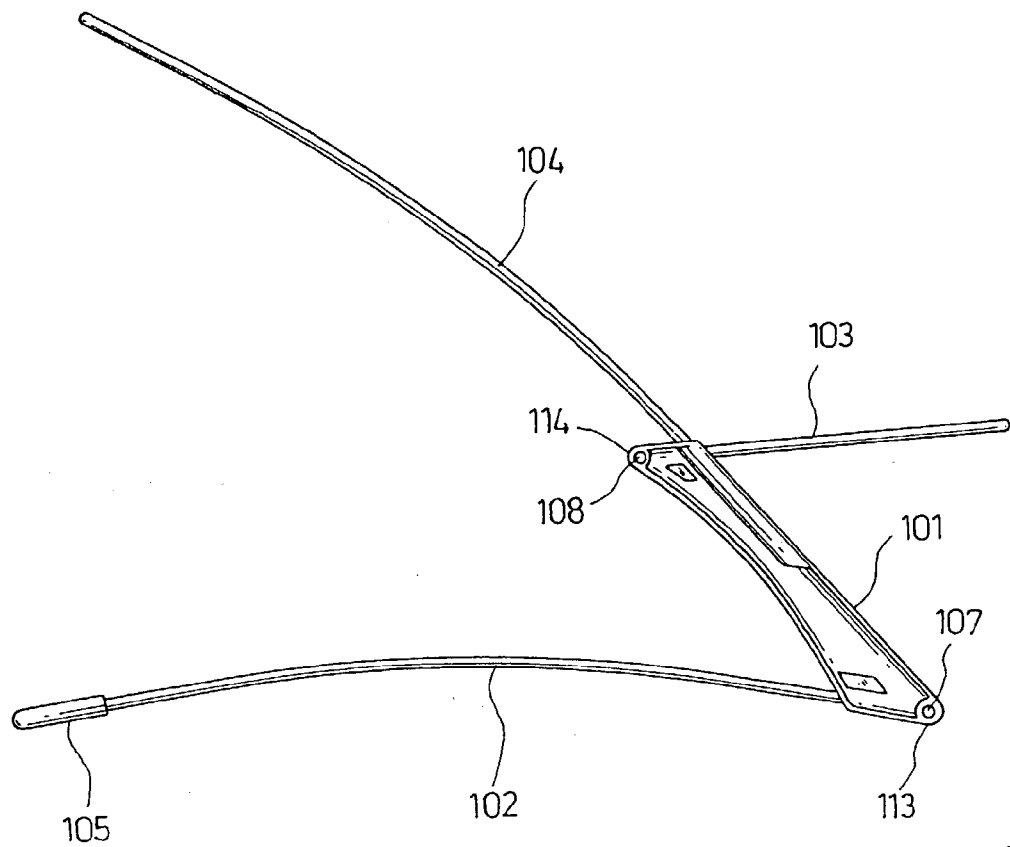


Figure 3

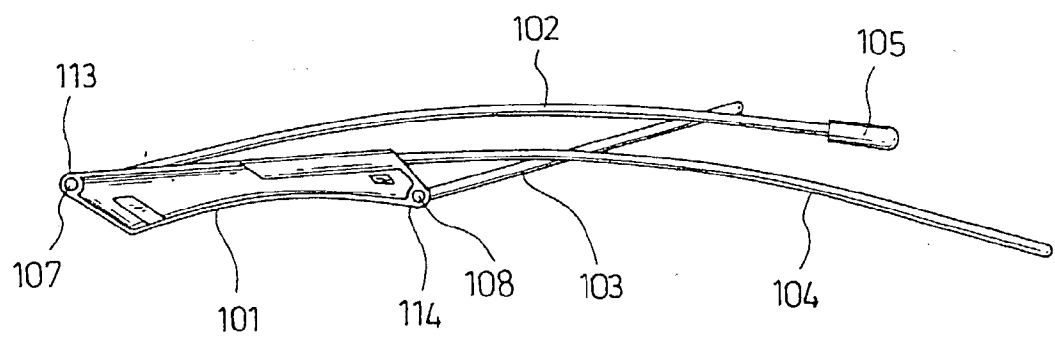


Figure 4

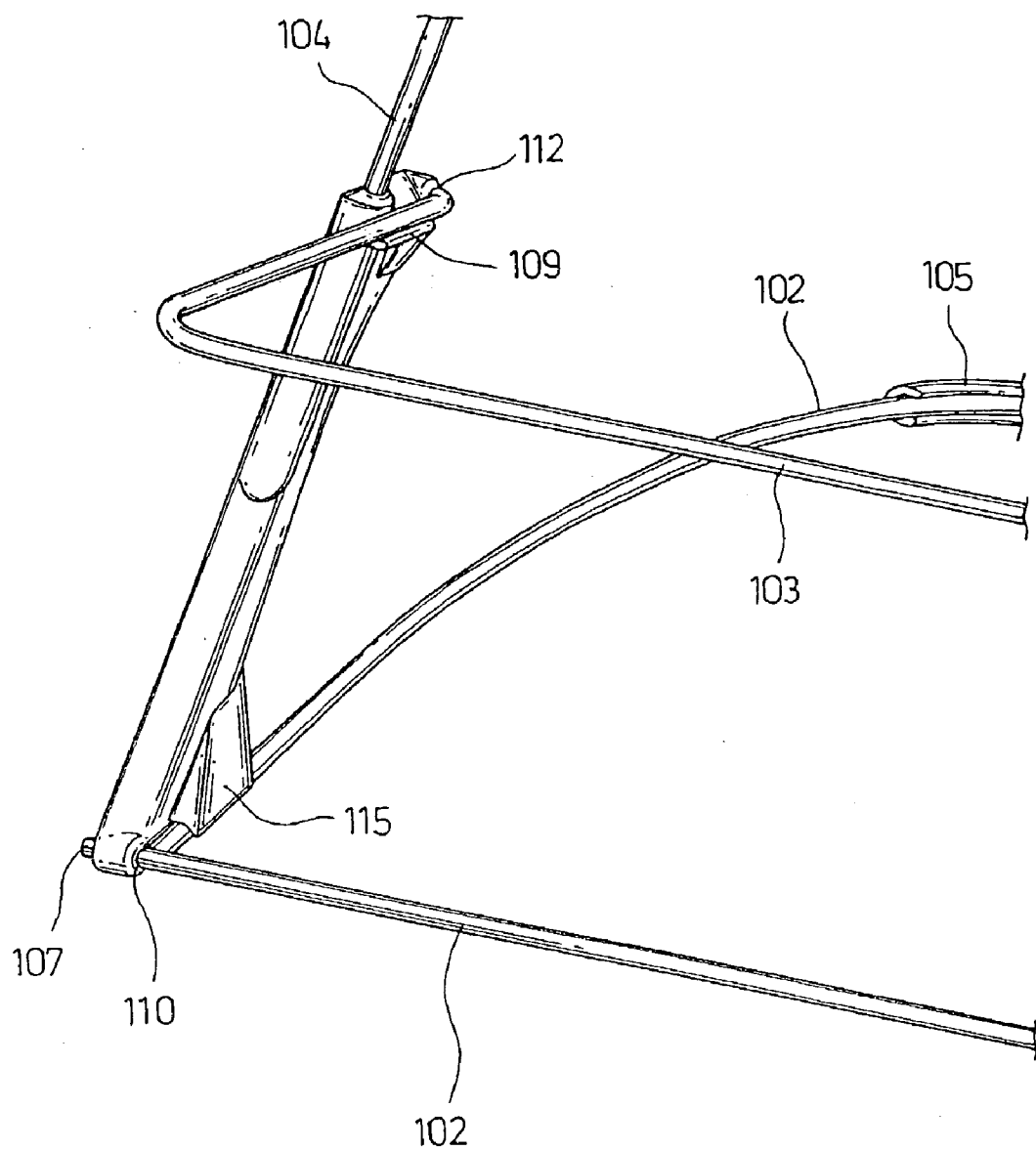


Figure 5

## INFANT SWINGING CHAIR

### FIELD OF THE INVENTION

[0001] The present application relates to an infant swing chair, particularly to an infant chair which may be folded easily and is light in weight.

### BACKGROUND OF THE INVENTION

[0002] Normally an infant desires to be caressed in a variety of forms, for example hugging or swinging, within a period, particularly 3 to 12 months from he or she was born. Aiming to this purpose, a lot of caressing equipments are introduced, such as cradle and swinging chair. Cradles are equipment in which an infant may lie down flatly and provided with a mechanism to swing the cradle gently. Swinging chairs are equipments on which an infant may seat or lie and provided with a swinging device.

[0003] For these above-mentioned equipments, except the most important factor, that is, safety, comfortable and practical performances also become major concerns for the consumers. It is desirable for infant cradle or swinging chair to swing gently and quietly. In addition, since cradle and swinging chair has short usage term, compact volume of storage is also important.

[0004] An existing infant swinging chair comprises a base portion, a chair portion, in which the base portion and the chair portion is connected with a spring or the like, such that when an infant seat thereon an effect of swinging may be obtained. In this type of swinging chair, all weight is supported by the spring provided between the base portion and the chair portion, therefore the durability of the spring become crucial. Once the spring becomes elastic fatigue, the swinging chair is out of work. Further, since the base portion and the chair portion are connected with a spring, the operation of folding the swinging chair is seriously affected. In other words, this type of swinging chair may not be folded into a small volume and is undesirable for portability.

### SUMMARY OF THE INVENTION

[0005] Aiming to the above problems in the existing equipments, the present application introduces an infant swinging chair having advantages of superior safety, light-weight performance, easy to operate and portability.

[0006] One object of the present application is to provide an infant swinging chair which achieves excellent safety performance by its simple structure.

[0007] Another object of the present application is to provide an infant swinging chair which reduce its weight by omitting some parts.

[0008] Another object of the present application is to provide an infant swinging chair which achieve the property of easy to operate and comfortable by utilize the nature of the material.

[0009] Another object of the present application is to provide an infant swinging chair which may be folded into a small volume to expedite portability and storage for the user.

[0010] The above features of the present application will be described by referring to the following preferable embodiment and drawings.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0011] **FIG. 1** is a perspective view of an embodiment of an infant swinging chair according to the present application;

[0012] **FIG. 2** is a disassemble view of an embodiment of an infant swinging chair according to the present application;

[0013] **FIG. 3** is a side view of an embodiment of an infant swinging chair according to the present application, which is under a using condition;

[0014] **FIG. 4** is a side view of an embodiment of an infant swinging chair according to the present application, which is under a folded condition;

[0015] **FIG. 5** shows an enlarged view of the fixture block of an embodiment of an embodiment of an infant swinging chair according to the present application.

### PARTS LIST

- [0016] 100 swinging chair
- [0017] 101 fixture block
- [0018] 102 base supporting structure
- [0019] 103 seat supporting structure
- [0020] 104 seatback supporting structure
- [0021] 105 mat
- [0022] 106 longitudinal groove
- [0023] 107 first protrusion
- [0024] 108 second protrusion
- [0025] 109 horizontal protrusion
- [0026] 110 first pivot hole
- [0027] 111 end portion
- [0028] 112 second pivot hole
- [0029] 113 first pivot portion
- [0030] 114 second pivot portion
- [0031] 115 base protrusion

### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0032] **FIG. 1** is a perspective view of an embodiment of an infant swinging chair according to the present application. As shown in **FIG. 1**, swinging chair 100 comprises a pair of fixture blocks 101, a base supporting structure 102, a seat supporting structure 103, a seatback supporting structure 104, a pair of cushions 105 provided on the base supporting structure 102.

[0033] The base supporting structure 102 is a metal frame substantially in a rectangular form, having a pair of arc-shaped long side and a pair of protrusions provided on each side of a short side respectively to pivotally connect to fixture block 101, such that the base supporting structure 102 may pivot with respect to the fixture block 101. Both sides of the seat supporting structure 103 are provided with outwardly extending protrusions for pivotally connecting to fixture block 101, such that the seat supporting structure 103

may pivot with respect to the fixture block **101**. Two ends of the seatback supporting structure **104** are inserted into the fixture block **101**, which will be described in details later.

**[0034]** FIG. 2 is a disassemble view of an embodiment of an infant swinging chair according to the present application. A first protrusion **107**, which is provided on both ends of the short sides of the base supporting structure **102**, is inserted into a first pivot hole **110** provided on lower portion of the inside of fixture block **101**, such that the base supporting structure **102** may pivot with respect to the fixture block **101**. A second protrusion **108**, which is provided on both ends of the seat supporting structure **103** and outwardly extends therefrom, is inserted into a second pivot hole **112** provided on upper portion of the inside of fixture block **101** such that the seat supporting structure **103** may pivot with respect to the fixture block **101** and may be supported by the horizontal protrusion **109**, which is provided adjacent to the second pivot hole **112**. An end portion **111** of the seatback supporting structure **104** is fixed into a longitudinal hole **106** provided on upper portion of the fixture block **103** such that a pair of fixture blocks **101** are positioned parallel to each other with the effects of the material strength of the seatback supporting structure **104**. Mats **105** are provided on distal corners of the base supporting structure **102** to prevent the swinging chair from slipping and shaking.

**[0035]** FIG. 3 is a side view of an embodiment of an infant swinging chair according to the present application, which is under a using condition. As shown in FIG. 3, under a using condition, seat supporting structure **103** and seatback supporting structure **104** are supported by fixture blocks **101** respectively to form a chair framework. The arrangement and details of connecting between the seat supporting structure **103** and the seatback supporting structure **104** and the fixture blocks **101** have been described and will not be repeated again here. The outside end of the mats **105** and the lower end of the fixture blocks **101** contact with ground surface to form a base plain and to sustain the weight of the swinging chair. As shown in FIG. 3, since both the longitudinal long sides of the base supporting structure **102** and the longitudinal long sides of the seatback supporting structure **104** extend in a ark shape, when an infant is seating on the seat structure, his or her weight applies on the seat structure therefore the ark-shaped structures flexibly deform, which renders a gentle swinging movement, such that the infant seating thereon may be properly caressed.

**[0036]** As previously described, the seat supporting structure **103** is pivotally connected to the second pivot member **114** of the fixture block **101**, and is limited to reverse-clockwise pivot rotation with the restrain of the longitudinal protrusion (not shown in this figure). Similarly, the base supporting structure **102** is pivotally connected to the first pivot member **113** of the fixture block **101**, and is limited to counter-clockwise pivot rotation with the restrain of the base protrusion (not shown in this figure).

**[0037]** FIG. 4 is a side view of an embodiment of an infant swinging chair according to the present application, which is under a folded condition. As previously described, with counter-clockwise pivot rotation of seat supporting structure **103** and base supporting structure **102** with respect to the fixture block **101**, the swinging chair under a extending usage condition as depicted in FIG. 3 may be converted into

one under storage condition as shown in FIG. 4. With this folding operation, the swinging chair of the present application becomes a flat shape as shown in FIG. 4, which occupies less space and is convenient for storage and carrying.

**[0038]** FIG. 5 shows an enlarged view of the fixture block of an embodiment of an embodiment of an infant swinging chair according to the present application. As shown in FIG. 5, the base supporting structure **102** supports the fixture block **101** in a predetermined position by means of inserting the first protrusion **107** into the first pivot hole **110**, in addition to providing a base protrusion **115** to restrain further movement. Similarly, the seat supporting structure **103** is pivotally connected to the second pivot hole **112** of the fixture block **101**, while restrained by the horizontal protrusion **109** so as to be kept in a horizontal position. This horizontal position is the above mentioned usage condition.

**[0039]** Since the present application employs the nature of the metal flexibility of the base supporting structure **102** and seatback supporting structure **104** to achieve a gentle up-and-down swinging for infant, additional spring device or device for limiting the range of the swinging may be eliminated. The above feature may, at one hand, reduce the weight of the swinging chair and, on the other hand, significantly improve the efficiency of operation for folding and extending the swinging chair.

**[0040]** In addition, since components of the swinging chair of the present application are reduced, the manufacturing cost is significantly reduced. Further less components will improve the durability of the swinging chair.

**[0041]** The present application is described in details by the above embodiment. The scope of the present application will be set in the following claims.

1. An infant swinging chair, comprising:

A pair of fixture blocks, having a first pivot hole on one end portion, and a second pivot hole on the other end portion, a horizontal protrusion being provided adjacent to said first pivot hole, a base protrusion being provided adjacent to said second pivot hole;

A seatback supporting structure, having both ends connected to said pair of fixture blocks respectively such that said pair of fixture blocks are opposing to each other;

A base supporting structure, pivotally connected to said pair of fixture blocks, and being restrained by said base protrusion such that said base supporting structure is able to be fixed in a first position;

A seat supporting structure, pivotally connected to said pair of fixture blocks, and being restrained by said horizontal protrusion such that said seat supporting structure is able to be fixed in a first position.

2. Infant swinging chair as claimed in claim 1, wherein said base supporting structure and said seat supporting structure are able to be fixed in a second position by a pivot operation.

3. Infant swinging chair as claimed in claim 1, wherein said first position is a usage condition.

4. Infant swinging chair as claimed in claim 2, wherein said second position is a storage condition.

5. Infant swinging chair as claimed in claim 1, wherein said seatback supporting structure, said seat supporting structure and said base supporting structure are made of flexible elongated metal material.

6. Infant swinging chair as claimed in claim 1, wherein said fixture blocks are made of flexible polymer material.

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